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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,174

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EXAMINER

BOCURE, TESFALDET

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/589,174	GILBERTON ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tesfaldet Bocure	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-15 are pending in this application.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/08/10 has been entered.

### ***Response to Amendment***

3. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 5,6,7,11,12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Klomsdorf et al., Klomsdorf hereinafter (US patent number 6,281,748, newly cited).

Klomsdorf teaches an apparatus (see figures 1 and 2), comprising modulating means for performing multi-carrier modulations wherein it further comprises: processing means for retrieving a digital value corresponding to the type of modulation associated with a transmission signal (see microprocessor 42 for generating a digital control word to the bias control unit 52); converting means converting said retrieved .digital value corresponding to the type of modulation associated with a transmission signal to an analog signal (see DAC 112 and 114 in figure 2); amplifying means (see amplifier 15 in figure 1 and 55 and 60 in figure 2) for amplifying the transmission signal, controlled by the analog signal converted from said retrieved digital value corresponding to the type of modulation associated with a transmission signal, decreasing bias current when decreasing the efficiency per bit of the digital modulation and vice versa (see col. 5, lines 24-42 for altering the bias signal according to the modulation format, where there is inherent rate associate for different modulation format) as in claim 1.

Per claim 2, Klomsdorf teaches that the apparatus of claim 1, further comprising signal transmitting means for wirelessly transmitting said transmission signal (see figure 1 where it is applicable for wireless transmitter).

Klomsdorf teaches a method (see figs 1 and 2 having inherent method for performing the claimed method) for controlling a transmitter apparatus, comprising: identifying and retrieving a digital value corresponding to a type of digital modulation for a transmission signal(see microprocessor 42 for generating a digital control word to the bias control unit 52);

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converting said retrieved digital value corresponding to a type of digital modulation for a transmission signal to an analog signal(see DAC 112 and 114 in figure 2); and controlling power amplification (see bias controlling unit 52 in figures 1 and 2) of said transmission signal using said analog signal converted from said retrieved digital value corresponding to a type of digital modulation for a transmission signal in decreasing a bias current of the amplifier when decreasing the efficiency per bit of the digital modulation and vice versa (see col. 5, lines 24-42 for altering the bias signal according to the modulation format, where there is inherent rate associate for different modulation format).

Per claim 6, Klomdsorf teaches the method of claim 5 further comprised of wirelessly transmitting said transmission signal (see figure 1 where it is applicable for wireless transmitter).

Per claim 7, Klomdsorf teaches the method of claim 5, wherein said digital value is based on the crest factor (see col. 2, lines 14-21 where the peak-to-average ration of the modulation format impacting the amplifier characteristics).

Klomdsorf teaches a apparatus (see figures 1 and 2), comprising:  
a processor for retrieving a digital value corresponding to the type of modulation associated with a transmission signal (see microprocessor 42 for generating a digital control word to the bias control unit 52);  
a digital analog converter (see DAC 112 and 114 in figure 2) converting said retrieved digital value corresponding to the type of modulation associated with a transmission signal to an analog signal;

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a power amplifier (see amplifier 15 in figure 1 and 55 and 60 in figure 2 for amplifying the transmission signal, controlled by the analog signal converted from said retrieved digital value corresponding to the type of modulation associated with a transmission signal, decreasing bias current when decreasing the efficiency per bit of the digital modulation and vice versa (see col. 5, lines 24-42 for altering the bias signal according to the modulation format, where there is inherent rate associate for different modulation format) as in claim 11.

Per claim 12 Klomdsorf teaches that the apparatus of claim 11, further comprising a signal transmitting element operative to wirelessly transmit said transmission signal (see figure 1 where it is applicable for wireless transmitter).

Per claim 14 Klomdsorf teaches that the apparatus of claim 11, further comprising a modulator operative to perform a plurality of different types of digital modulation (see col. 2, lines 8-22 for different modulation formats such as QAM, BPSK and QPSK).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 3, 4, 8-10, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klomdsdorf (US patent number 6,281,748, newly cited).

Klomdsdorf teaches the claimed subject matter in claim 1 including QPSK, QAM and BPSK, however fail to teach the claimed bi-phase shift keyed modulation in claim 3. Such a bi-phase shift keying modulation is notoriously known and Examiner is taking an official notice, Therefore, it would have been obvious to one of an ordinary skill in the art to phase shift keying modulation scheme of Klomdsdorf to include a bi-phase phase shift keying at the time the invention was made.

Klomsdorf teaches the claimed subject matter including a transmitter for transmitter as in claim 1. However Klomsdorf fails to teach that the apparatus of claim 1, wherein said transmitter apparatus is part of a mobile transceiver having a battery power supply as in claim 4. Such a batter in a wireless transmitter is well known where the system of Klomsdorf should have a battery to perform all the necessary functions to perform the transmission of the data Therefore, it would have been obvious to one of an ordinary skill in the art that the transmitter of Klomsdorf to a batter at the time the invention was made.

Klomsdorf teaches the claimed subject matter including a transmitter for transmitter including transmission of the data using QAM and BPSK as in claim 1. further Klomsdorf teaches that the transmitter alter the bias of the amplifier according to the transmission format (see col. 2, lines 8-22). However, Klomsdorf fails to teach that the method according to claim 5 wherein bias current is decreased when digital modulation is changed from 64 QAM  $\frac{3}{4}$  to BPSK  $\frac{1}{2}$  as in claim 8. such a an M-arry transmission technique, where when the number of bits is different according the to the transmission rate requires different amplification ratio is well known. Therefore, it would have been obvious to one of an ordinary skill in the art to change the bias current or voltage of the amplifier according the number of bits to be transmitted at the time the invention was made. It should be noted that the bias required for lesser bits is less as oppose to higher bits and vise-versa.

Klomsdorf teaches the claimed subject matter including a transmitter for transmitter as in claim 1 including a transmitter for transmitting a broadband



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communication such as TDM and CDMA. However, Klomsdorf fails to teach the method according to claim 7 wherein it is in compliance as in claim 9 with one of the standards belonging to the set comprising: Hiperlan type 2; IEEE 802.11a; DVB-T 802.16a as in claim 9. Such claimed standards, Hiperlan type 2; IEEE 802.11a; DVB-T 802.16a, for use in broadband communication system including TDM and CDMA are well known and examiner is taking official notice. Therefore, it would have been obvious to one of an ordinary skill in the art to use the Hiperlan type 2; IEEE 802.11a; DVB-T 802.16a at the time invention was to process the data to be transmitted by the transmitter of Klomsdorf at the MAC and PHY layer.

Klomsdorf teaches the claimed subject matter in claim 1 including QPSK, QAM and BPSK, however fail to teach the method of claim 5, wherein said type of digital modulation including a bi-phase shift keyed modulation as in claim 10. Such a bi-phase shift keying modulation is notoriously known and Examiner is taking an official notice.

Klomsdorf teaches the claimed subject matter including a transmitter for transmitter. However Klomsdorf fails to teach that the apparatus of claim 11, wherein said apparatus is embodied as a mobile transceiver having a battery power supply as in claim 15. Such a battery in a wireless transmitter is well known where the system of requires to perform all the necessary function. Therefore, it would have been obvious to one of an ordinary skill in the art that the transmitter of Klomsdorf to a battery at the time the invention was made.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patent numbers 5,225,902, 5,655,220, 6,194,968, 6,631,268 and 6,646,600 and US patent publication numbers 2002/0132652 and 2002/0153956 issued to McMullan, Weiland et al., Winslow, Lilja, Vail et al., Steel et al and Wojslaw respectively disclose a transmitter having for controlling the bias current of the transmitter amplifier using analog control signal., .

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tesfaldet Bocure whose telephone number is (571) 272-3015. The examiner can normally be reached on Mon-Thur (8:00a-5:30p) & Mon.-Fri (8:00a-5:30p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tesfaldet Bocure/  
Primary Examiner, Art Unit 2611

/T. B./  
Primary Examiner, Art Unit 2611

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